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Violence against women in Papua New Guinea

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ABSTRACT

The spread of HIV in Papua New Guinea is influenced by the social and cultural context. This study has aimed to develop knowledge about the different forms of domestic violence experienced by PNG women and their HIV status, and to give women a voice by asking them about their experiences of violence and their recommendations for services and community responses for women experiencing violence. The study has used a mixed method approach to collect quantitative and qualitative data through structured interviews with a sample of 415 women who accessed antenatal and Voluntary Counselling and Testing services across four provinces of Papua New Guinea. Participants were asked about violence they had experienced in their relationships, and the impact of the violence on their lives. The quantitative data were analysed using SPSS, and the qualitative data were coded and themes identified using a grounded theory approach. Physical and emotional abuse in relationships were reported by 58% of women, financial abuse was reported by 47%, sexual abuse was reported by 44%, and social isolation by 38%. Women who reported violence in their relationships were, on average, 2 years older than women who said they had not been abused and were more likely to be HIV positive. Sexual abuse in relationships was strongly associated with HIV positive status. Level of school education, post-school education and paid employment were not found to influence the rates at which women reported domestic violence. Women spoke about the negative impact of violence on their lives. Women's attitudes towards the violence included acceptance because of financial dependence on husbands and partners and cultural customs, such as payment of bride price and polygamy. Seventy-five percent of the sample had never accessed support services. Participants in the study called for changes to legislation to protect women's rights, more informed responses to violence against women by police, strengthening of court responses to offenders, empowerment of women, employment opportunities to reduce financial dependence on

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men, and education of men in the need to care for women. There was also a strong recommendation for making community and counselling services available and accessible for women who are victims of violence. The study concludes that programs which are concerned with the prevention of HIV in PNG must include interventions to counter domestic violence and increasing the social status of women through greater access to education and employment.

Key words: domestic violence; HIV transmission; gender; impact of violence; cultural customs in PNG; support services

The present article presents the results of a mixed method study conducted across four provinces of Papua New Guinea (PNG): the National Capital District (NCD), Western Highlands, Western Province and Morobe.[1] The rationale for the study is that social and cultural aspects of gender relations and sexual behaviour are likely to be slow to change if they do not become subject to social debate about how they contribute to HIV. These sensitive sociocultural aspects of HIV transmission have not been widely researched in the PNG context and may be barriers to the successful implementation of programs which aim to reduce the spread of HIV. The recommendations arising from this study will be used to improve the specificity and effectiveness of HIV/AIDS education and counselling programs, through increased knowledge of the barriers to change in the sexual behaviour of men and women and barriers to accessing HIV/AIDS counselling and support services for women.

The risk factors for women in developing nations of becoming infected with HIV have been identified as lack of economic opportunities, polygamous marriages, labour migration, resistance to condom use and cultural ideas that link condom use with promiscuity (Paterson 1996: 20–21). A lack of control in sexual matters for married women has also been shown to increase the transmission of HIV in African countries (Black 1990: 9–10). These research findings demonstrate the vital importance of researching how gender affects the transmission of HIV in the PNG context, so that social policy and program planning can better meet the needs of local communities and cultures.

Knowledge of the extent of the HIV epidemic in PNG is limited; the number of people aged 15 to 49 years living with HIV is estimated as somewhere between 25,000 and 69,000 (World Health Organisation [WHO] 2005a). Eighteen percent of patients treated in the emergency department in Port Moresby Hospital in 2003 tested positive for HIV antibodies (Curry et al 2005). The primary mode of transmission in PNG is heterosexual contact. At the time at which this study was conducted, there was limited HIV testing available; surveillance was largely restricted to urban areas and prevalence of HIV in many provinces was unknown (Schwartländer et al 1999; WHO 2005a).

There is a significant disparity of research knowledge on HIV between developing countries and 'developed' countries. Most of the research on

1. The research study was conducted in partnership between the University of Canberra and the PNG National HIV/AIDS Support Program (NHASP) and was funded by the PNG National Aids Council with the support of the Australian Government. The research team was made up of three co-researchers; two were in-country researchers working in NHASP (BM and SW), and one worked at the University of Canberra in Australia (IL) and provided regular training for HIV counsellors in PNG since 2003.

violence against women and HIV has been conducted in the US, where prevalence of HIV among women and the general population is low (Dunkle et al 2004). In contrast, in most developing countries there is a high prevalence of HIV among women in the general population. Because of the vast social and economic differences, findings from US-based studies are not necessarily applicable to other cultures and contexts. For example, payment of bride price, polygamous marriages and sexual bartering, while common in PNG and likely to be significant determinants of HIV transmission, are less common in many other developing countries and are almost unheard of in wealthy countries such as the US.

Women in PNG suffer significant social disadvantage, as they face a higher risk of maternal mortality (375 per 100,000 maternal births) than women from all other Pacific Islands (Australian Government AusAID 2003). Women are highly marginalised in PNG; for example, the representation of women in all levels of government is only 4.3%, and violence against women is still tacitly accepted in the community (Borrey 2000; National HIV/AIDS Support Project 2002). The health system in PNG is under resourced, especially in rural and remote areas. Life expectancy for men in 2000 was 52.5 years, and for women, 53.6 years (WHO 2005a).

Some previous groundbreaking, large scale research studies on violence against women in PNG by the PNG Law Reform Commission are now quite dated and predate the HIV pandemic, which has impacted greatly upon intimate partner relationships (eg the Rural Survey conducted in 1985, the Urban Low Income Earner Survey in 1986 and the Urban Elite Survey in 1986, as cited in Morley 1994). These studies showed that 70% of women had suffered domestic violence, and also that this was not considered a problem in PNG (Makail 2000). There was no attempt made to link the incidence of violence with other demographic information in these major surveys (Morley 1994).

The perspectives of women themselves are important to document, because ethnographic researchers in PNG have often only included the perspectives of men and of women elders in the community, but not those of victims of violence. Borrey, for example, proposed that the term 'rape' has no meaning, because elder women in the Highlands spoke about adultery when asked about forced sexual intercourse, and asserted that 'rough (painful) sex was considered desirable and enjoyable by both genders' (2000: 107). This review indicated that violence against women is common in PNG, and that violence in intimate partner relationships is likely to be a factor in HIV transmission within PNG.

Studies in other developing nations have shown that up to 40% to 48% of people suffering from HIV/AIDS are women, and that this proportion increases over time (Miguez-Burbano et al 2002). The aims of the present study, therefore, were to: (a) examine the prevalence of different forms of domestic violence among PNG women attending Voluntary Care and Counselling and antenatal clinics; (b) examine the demographic characteristics and HIV status (including other sexually transmitted infections) of PNG women who have experienced domestic violence; and (c) develop recommendations for increasing the effectiveness of HIV counselling and testing services, and support services for women in general, by speaking directly to women about their experiences and attitudes towards violence and the impact on their lives. In particular, this article presents the findings on violence against women.

Method

Design

A mixed method approach was used in this study, which combined both quantitative and qualitative methods. This was seen as appropriate because quantitative data enabled the statistical analysis of women's experiences of violence in relation to their HIV and STI status, whereas the qualitative method facilitated access to women's

perspectives on violence in their intimate partner relationships and how this impacted upon their lives (Robson 2002). The quantitative analysis focused on the relationships between the variables of relationship violence, education, employment and involvement in exchange of sex for goods, money and favours, across the sub-groups of women who tested positive and negative for HIV and other sexually transmitted infections (STIs). The qualitative method used in this study explored women's subjective experiences of different forms of relationship violence and their perceptions of and responses to violence.

A human rights framework has been used in this study for understanding violence against women as 'any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women' (United Nations 1993 cited in Bott, Morrison & Ellsberg 2005: 3). A review of the literature found a wide range of definitions of violence against women. Although a definition that is too broad can reduce discussion to the level of the rhetorical (Gordon & Crehan 1999), a definition that is too narrow risks under-reporting the scale of the problem (Gordon & Crehan 1999; WHO 2001).

The types of domestic violence we asked women about in this study are physical violence, emotional abuse including verbal abuse, sexual abuse, financial abuse and social isolation. We defined these terms in the following ways: physical abuse means using physical force such as pushing, shoving, hitting, kicking, choking and use of weapons; emotional abuse is integral to all other forms of domestic violence and includes verbal abuse such as name calling and put downs, often in front of others, creating an atmosphere of fear and not allowing her to make choices; sexual abuse is where a man forces a woman to have sex with him or with others when she does not want to; financial abuse is where a man limits a woman's independence in the relationship by deliberately not giving her money or goods; and social isolation is where a man controls a woman's freedom of movement (eg she is not allowed to see her family or friends). All of these forms of violence involve a lack of respect for women. Prior to this study, financial abuse and social isolation as a deliberate form of control in relationships have not been the subject of research in the PNG context. In the World Report on Violence and Health, Krug (2002) recommended asking questions about different forms of violence to better understand the nature of violent relationships and to enable comparisons across different studies.

Sample

The four provinces of NCD, Western Highlands, Western Province and Morobe were selected for the study. These provinces were chosen as representative of significantly different 'culture areas' within PNG (Jenkins 2006: 7), which is characterised by its cultural diversity and variety of languages and social systems. The NCD includes the capital Port Moresby, and was seen as an important area in which to conduct research, as 66% of known cases of HIV are found in NCD (National AIDS Council Secretariat 2002). The Western Highlands has the highest rate of new HIV/AIDS infection in PNG (National AIDS Council Secretariat 2005; National AIDS Council Secretariat 2002). While Morobe and Western Provinces have relatively low rates of detected HIV infection (5% and 2% respectively in 2002), HIV testing was less accessible in these areas at the time of data collection, and communities are likely to have higher rates of infection than currently shown (National AIDS Council Secretariat 2002). Western Province is the site of a large mining company, which relies on a mobile working population and provides cash salaries for many local workers, both factors creating an environment where sex work, higher rates of casual sex, and HIV and other STI transmission are more likely.

Four-hundred-and-fifteen women attending 17 antenatal and Voluntary Counselling and Testing clinics were interviewed between February 2006 and January 2007 about their experiences of violence, 100 in the Western Highlands,

134 in NCD, 75 in Morobe and 106 in Western province. The consent rate was 90%. In 2006, 3052 people across PNG were tested for HIV/AIDS (PNG National AIDS Council Secretariat 2008). The sample used consecutive sampling to access a wide range of participants who accessed Voluntary Care and Counselling and antenatal clinics in terms of their relationship status, educational levels attained, paid employment, age and involvement in exchange of sex for money, goods or favours. Most women who participated in the study were aged between 20 and 30 years, with a smaller peak again at 35 years. The clustering of scores around the ages of 25, 30 and 35 may have occurred through participants estimating their age; some women, particularly in rural areas, did not know their exact age. Participants' ages were distributed between 15 and 60.

Procedure

The research study was advertised at participating antenatal and STI clinics and Voluntary Counselling and Testing sites as a women's health study, using colourful posters in English and pidgin in the waiting rooms of the antenatal clinics, and through information provided by health workers to their clients. It is a recommendation by the WHO (2001) that research into violence against women in resource-poor contexts should be advertised in a general way as a women's health study to protect the safety of both participants and interviewers within their communities.

Female interviewers in each province were invited to attend interviewer training, because they were already working as HIV counsellors who had been trained in the NHASP Train other Trainers program for HIV counsellors. The two-day training program conducted in each province covered the purpose of the study, the skills of research interviewing, the ethics of research, accurate recording of qualitative and quantitative data and information on sexual assault, domestic violence and child sexual abuse. Interviewers were expected to conduct 20 interviews and were allocated 20 unique research codes for the 20 participants they interviewed. The interviewers took notes in pidgin directly onto the interview schedule during the interview, which were then translated by the co-researchers at NHASP for transcribing and analysing at the University of Canberra.

Measures

The interview schedule was developed in consultation with a range of stakeholders, which included HIV counsellors, counsellor trainers, researchers in the field of HIV and members of the National HIV Committee. The structured interview schedule consisted of 37 questions including both qualitative and quantitative items. Interviews took between 45 minutes to 1 hour. The questions explored women's experiences of violence, for example: 'Have you ever experienced violence in your relationships?' and specifically asked about physical, sexual, emotional and financial abuse and social isolation. Women who answered 'Yes' to any of these forms of violence were then asked an open-ended question about how violence affected their relationship with their husband or partner. Women were also asked about negotiating sexual practices in their relationships, in addition to demographic questions about age, level of education and employment. Participants were asked about their access to and recommendations for support services. They were also asked 'What kinds of services do you think are needed by women experiencing violence or unwanted sex?' The interview schedule was translated into Tok Pisin (Melanesian pidgin) and then refined further on the basis of feedback from interviewers during training. Participants were tested with their consent for HIV, using two thermal stable rapid-test blood tests, and other sexually transmitted diseases such as gonorrhoea and syphilis, as a normal procedure when attending VCT and antenatal clinics. Pre- and post-test counselling were also routinely provided as part of clinic attendance. However, HIV testing was not available in some clinics in 2006, particularly in remote areas.

Ethical considerations

Prior to the commencement of data collection, ethics approval for the study was gained from the Research committee of the National Aids Council in PNG. This is a requirement for all HIV research conducted in PNG.

To ensure that interviewers were not in the dual role of providing HIV counselling and interviewing participants for the study, interviewers accessed participants for the study at a different clinic, centre or hospital from the one in which they usually worked or volunteered. There were no problems with dual roles reported by interviewers to their interview coordinator.

The informed consent of participants was gained by a verbal explanation from interviewers of the purpose of the project. The study used verbal explanations because of the low rates of literacy, especially in rural areas, so as not to exclude the experiences of some potential participants from the study. Participants were informed that access to voluntary counselling and testing service was not dependant on their participation in the research study. Participants were then asked to indicate verbally whether or not they gave consent. The answer, 'Yes' or 'No', was recorded on the schedule. The confidentiality of participants in relation to their HIV and/or STI status was maintained by having the interviewer record the clinic patient number, the research code for that participant and the clinic code on the interview schedule. The names of participants were not recorded.

The interview coordinators in each province were responsible to check that the interview schedules were competently completed and, if not, to give feedback to the interviewer. The interview coordinators were also responsible to follow up with participating clinics using the patient number to ascertain HIV and/or STI status. A clinic record form was created, on which the interview coordinator recorded participants' HIV and STI test results against each research participant code for the province. Interview coordinators also provided debriefing to each interviewer, given that the questions were of a sensitive nature and that the answers given by women were in many instances distressing. Listening to and empathising with trauma experienced by clients has the potential to bring about vicarious trauma in counsellors, and potentially research interviewers are also at risk of feeling distressed by participants' responses (Lalor, Begley & Devane 2006).

Analysis

Quantitative data were analysed using SPSS (Statistical Package for the Social Sciences) to examine whether experiences of violence (rates of incidence, types and relationship to assailant) and negotiation of sexual relationships were statistically different across the two groups of HIV positive and negative participants on variables such as participants' age, education, paid employment, child sexual abuse and forms of domestic violence. These were cross tabulated to investigate the relationships, or degrees of association, between variables (Robson 2002). The relationships between categorical variables were tested for statistical significance using chi-square tests, with an exact test (Monte Carlo method) being employed when frequencies in some sub-classes were low. A .05 level of significance was used for all tests.

The qualitative data were analysed thematically, informed by a grounded theory approach which is a dynamic and interactive process of analysis (Sarantakos 2005). The NVivo software package, which was designed using grounded theory as its base (Richards & Richards 1991; Robson 2002), was used to facilitate the systematic analysis of qualitative data. NVivo allows researchers to code data into themes and subthemes to enable comparisons and discovering of patterns among sub-groups of women, and new categories describing the phenomenon under study (eg damage to personal property as a form of violence against women). Findings arising from the qualitative data analysis were compared with previous research into violence against women in similar settings, as well as reports from

the National AIDS Council, to ensure the validity of interpretations of the data and conclusions.

Results

Findings from the analyses of quantitative and qualitative data, gathered on the experiences of violence that participants reported in their primary relationships, are presented under several headings: sample characteristics, physical violence, sexual abuse, emotional abuse, financial abuse and social isolation. The section concludes with a summary of participants' recommendations for support services.

Sample characteristics

Table 1 demonstrates the relationship status, school education level attained, access to post-secondary school education and employment status of women in the sample. These results show a lack of access for women to higher levels of school education and post-secondary education and a low rate of participation in the workforce.

The HIV and STI test results for the sample were as follows: 56.7% (n = 177) tested negative for HIV; 17.9% tested positive for HIV (n = 56); 10.6% (n = 33) tested positive for STIs with no HIV test available; 10.9% (n = 44) tested negative for STIs with no HIV test available; and 3.8% (n = 12) tested positive for STIs but were HIV negative. In all, 312 women were tested for either HIV or STIs and 103 women were not tested. Women in the sample who were not tested either had pre-test counselling and chose not to proceed with testing, or the test results were not available due to administrative error.

Physical violence

Physical violence in relationships was experienced by 237 women (ie 58% of the sample). The analysis of the qualitative data found a wide range of descriptions of the physical abuse women experienced in relationships: being beaten, hit, bashed, punched and their husband or partner 'fighting' them. Injuries were more severe when weapons are used; those most frequently

Table 1: Demographic characteristics of sample in percentages

Variable	Category	*n*	Percentage
Relationship status	Married/partner	339	81.9
	Separated	28	6.7
	Not married	17	4.1
	Widowed	15	3.6
	Other	16	3.7
Educational level completed at school	No schooling	59	14.2
	Grades 1–6	184	44.5
	Grades 7–10	147	35.4
	Grades 11–12	18	4.3
	Other	7	1.6
Post-secondary study	No further study	387	93.8
	University study	10	1.9
	Other study	18	4.3
Employment	Not employed	329	79.3
	Employed	74	17.8
	Other	12	2.9

Note: N = 415.

mentioned include coffee sticks, sticks, knives, bush knives and hot water:

> I was only 18 when he bashed my face up. I was a dead person but he was lucky and never went to court. On top of that I was with a baby.

> Big fights almost took my eyes out, burned with hot water.

The injuries women described as a result of physical abuse in their relationships included cuts and bleeding, burns, black eyes, a broken back, broken finger, broken teeth, eye injuries and 'he nearly killed me'. Some women did not see the violence they experienced as serious or severe, especially where they did not suffer permanent injury:

> He beats me up but does not hurt my body, so I am okay.

> He hits me but does not injure any part of my body. We argue only and compromise.

Physically abused women were, on average, 2 years older than non-physically abused women: 28.6 years of age as opposed to 26.6 years of age (as shown in Table 2). A *t*-test shows that this is a statistically significant difference $t(383) = 2.64$, $p = .009$. The rate of physical abuse reported by women in their relationships was not associated with the level of school education they have achieved. For women educated to above grade10, 61.5% ($n = 59$) reported physical abuse compared with 57.5% ($n = 176$) for women educated to below grade 10 ($\chi^2 = 0.468$; $df = 1$; $p = .494$). Two of the eight women (25.0%) who were tertiary educated reported physical abuse compared with 58.7% of women with no tertiary education reporting physical abuse ($n = 223$). However, these percentages were not found to be significantly different ($\chi^2 = 4.192$; $df = 2$; $p = .128$).

Women in paid employment reported physical violence in their relationships at similar rates to women who were not employed: 60.3% ($n = 44$) compared with 57.6% ($n = 186$); 71.4% ($n = 5$) self-employed women reported physical violence. A chi-square test showed that these findings were not statistically significant ($\chi^2 = 4.183$; $df = 4$; $p = .391$). Of the women who reported physical abuse in their intimate partner relationships, 28.2% ($n = 42$) were HIV positive, compared with 16.5% ($n = 16$) of women not experiencing physical abuse in their relationships. A chi-square

Table 2: Mean ages of women and statistically significant differences in experience of forms of violence

Form of violence	Experience of violence	*n*	*M*	*SD*	*SE*	*t*	*p*	*df*
Physical violence	No	158	26.6	7.2	.58	2.64	.009	383
	Yes	227	28.6	7.4	.49			
Sexual abuse	No	204	26.4	6.5	.46	3.75	.000	382
	Yes	180	29.1	7.8	.58			
Emotional abuse	No	157	26.3	6.6	.53	3.27	.001	380
	Yes	225	28.8	7.8	.52			
Financial abuse	No	203	27.1	7.4	.52	1.74	.083	382
	Yes	181	28.4	7.3	.54			
Social isolation	No	235	27.9	7.3	.48	.78	.439	378
	Yes	145	27.3	7.1	.59			

Note: $N = 415$.

test showed that this was a statistically significant difference (χ^2 = 4.458; *df* = 1; *p* = .045). Physical violence, therefore, was associated with a greater risk of HIV. Similarly, women who reported physical abuse were more likely to test positive for other STIs (χ^2 = 10.213; *df* = 5; *p* = .046). The percentage of physically abused women who tested positive for an STI was 11.4% (*n* = 21) compared with 9.3% of the STI positive women not reporting physical violence (*n* = 12).

Sexual abuse

Sexual abuse in relationships was reported by 185 women (ie 44.5% of the sample). It was a common experience for participants to be forced to have sex in their intimate partner relationships: 52.2% of women (*n* = 217) said they could not say no to sex with their husband or partner. The qualitative analysis showed that sexual abuse was often accompanied by physical violence:

> Sometimes he forces me to have sex with him if I don't want to.

> My husband forces me to have oral sex on him and hold his penis. And also he practice oral sex on me. He wants to have sex two to three times a day, also in the night.

Sexually abused women were, on average, 2.7 years older than non-physically abused women: 29.0 years of age as opposed to 26.3 years of age (see Table 2). A *t*-test showed that this was not a statistically significant difference *t*(382) = 3.75, *p* = .083. The rates at which women experienced sexual abuse in their relationships was not associated with the level of school education they have achieved. Of women (*n* = 140) who completed their schooling before grade 10, 45.6% reported sexual abuse in relationships compared with 44.2% of women (*n* = 42) who completed schooling to the level of grade10 or higher (χ^2 = 0.057; *df* = 1; *p* = .812); and 37.5% of university educated women (*n* = 8) and 33% of women with other post-school training (*n* = 18) reported being sexually abused by husbands or partners, compared with 46% of women without further education. These results were not statistically significant, probably due to the small number of women who access post-school education (χ^2= 1.323; *df* = 2; *p* = .516). Employment had little effect on the rates at which women reported sexual abuse in their relationships: 45.4% of women not currently working in paid jobs (*n* = 147) reported sexual abuse compared to 44.4% of women currently employed (*n* = 32) (χ^2 = 3.646; *df* = 4; *p* = 0.506).

Sexual abuse in relationships was found to be strongly associated with positive HIV status. Participants who reported being sexually abused in their intimate partner relationships were twice as likely to be HIV positive compared with women who were not being sexually abused, 29.5% (*n* = 38) compared with 15.5% (*n* = 18), (χ^2 = 6.731; *df* = 1; *p* = .01). Of the women who reported sexual abuse in their relationships, 12.3% tested positive for an STI in the absence of an HIV test compared with 8.9% of women who did not report sexual abuse. Of the sexually abused participants, 5.2% also tested positive for an STI when HIV negative compared to 2.5% of women who were not sexually abused. A chi-square test showed that these results were statistically significant (χ^2 = 24.105; *df* = 4; *p* = .000).

Emotional abuse

Fifty eight percent of the 234 women in this sample described being emotionally abused in their relationships. Women who had been emotionally abused also gave descriptions of verbal abuse. The analysis of the qualitative data provides descriptions of women's experiences of emotional abuse, such as the use of threats to control their behaviour, including the threat of physical violence, invoking guilt, not being spoken to, their partner or husband leaving temporarily and put downs:

> He gets cross and says stuff to abuse me and make me feel guilty.

> He doesn't beat me but what he does really affects me mentally.

The most common form of verbal abuse the women described was swearing, 'strong words' and put downs, often of a sexual nature. Verbal abuse was commonly described as occurring in conjunction with physical and sexual violence. Verbal abuse was so serious for some women that they considered leaving their relationships. However, when verbal abuse was not combined with physical abuse, some women said they were not disturbed by it: 'I don't worry too much when he talks bad.'

Emotionally abused women were, on average, 2.5 years older than non-physically abused women: 28.8 years of age as opposed to 26.3 years of age (see Table 2). A *t*-test demonstrated a statistically significant difference $t(380) = 3.27$, $p = .001$. Women in the sample who were educated to grade 10 or above reported emotional abuse in their relationships: 64.2% ($n = 61$) compared with 55.7% of women who left school before grade 10 ($n = 170$) ($\chi^2 = 2.131$; $df = 1$; $p = .144$). Of women with tertiary education (n = 4), two reported emotional abuse.

The rates at which women reported emotional abuse were not influenced by their paid employment. Equal rates (57.1% compared with 56.9%) of employed women ($n = 41$) and women not currently in paid employment ($n = 184$) reported emotional abuse by their husbands or partners ($\chi^2 = 3.090$; $df = 4$; $p = .616$). Self-employed women and women doing voluntary work appeared to be most vulnerable to emotional abuse, although the numbers of women in both these categories were low and the differences not statistically significant. Emotional abuse experienced by women was shown to have a relationship to their HIV status. Women who reported emotional abuse in their intimate partner relationships were more likely to be HIV positive: 28.6% ($n = 42$) compared with 14.6% of HIV positive women ($n = 42$) who did not report emotional abuse. A chi-square test demonstrated a significant difference ($\chi^2 = 6.407$; $df = 1$; $p = .013$). Therefore, emotional abuse was an indicator of women's risk for HIV transmission in this sample.

Financial abuse

Of the total sample, 189 women (47%), reported that they suffered from financial abuse in their relationships. Financial abuse was described as limiting access to goods and money to control the wife or partner, which created great insecurity for the women interviewed:

> He won't talk to me and give me money till afternoon or for days or sometimes a week.

> Our marriage is not going well because of a lack of emotions and financial support from my husband.

Women who reported financial abuse were, on average, 1.3 years older than non-physically abused women: 28.4 years of age as opposed to 27.1 years of age. A *t*-test demonstrates that this is a statistically significant difference $t(382) = 1.74$, $p = .083$. Women's level of school education had no impact on the rates at which they experienced financial abuse ($\chi^2 = 0.492$; $df = 1$; $p = .483$). One in two women reported financial abuse regardless of their level of school education; 62.5% of tertiary educated women ($n = 5$) answered Yes to experiencing financial abuse by husbands or partners compared with 46.2% of non-tertiary educated women and 44.4% of women with other forms of post-school education. However, this was not a significant result ($\chi^2 = 0.869$; $df = 2$; $p = .648$). Women who had achieved tertiary education were more likely to be in paid employment: 62.5% of women in the sample with this level of education had a paid job compared with only 14% of women without any post-school education ($p = .000$). Women who currently worked in paid employment were slightly more likely to report financial abuse: 50.0% of employed women ($n = 36$) reported financial abuse compared to 45.5% of women not currently working in paid employment ($n = 147$). A chi-square test confirmed that this was not a significant result ($\chi^2 = 5.296$; $df = 4$; $p = .266$).

There was a strong relationship between financial abuse and women's involvement in exchang-

ing sex for money: 80.5% of financially abused women (n = 33) reported that they exchanged sex for money compared with 19.5% of non-financially abused women who were involved in transactional sex (n = 8) (χ^2 = 21.688; df = 1; p = .000). There was an even stronger relationship between financial abuse and women's involvement in exchanging sex for goods: 78.6% of financially abused women (n = 22) reported that they had exchanged sex for goods compared with 21.4% of non-financially abused women who were involved in transactional sex (n = 6) (χ^2 = 12.612; df = 1; p = .00). Financial abuse, however, did not influence rates of exchange of sex for favours: 51.5% of financially abused women (n = 17) had exchanged sex for favours compared with 46.0% of non-financially abused women (n = 171) (χ^2 = 0.375; df = 1; p = .54).

Responses of women who reported financial abuse by their husbands or partners were compared with their HIV positive status: 26.9% of women who reported financial abuse were HIV positive (n = 32) compared with 19.8% of HIV positive women who did not report financial abuse (n = 25). However, this was not statistically significant (χ^2 = 1.704; df = 1; p = .124). Financial abuse, while having an effect on the quality of women's lives, was therefore not demonstrated to be a risk factor for HIV transmission. Rates of STI infection were also not shown to be associated with financial abuse: 9.8% of financially abused women tested positive for an STI compared to11.4% of non-financially abused women (χ^2 = 10.213; df = .5; p = .740).

Social isolation

Of the sample, 151 women (38%) reported that they had experienced social isolation and control in their relationships, which involved their husbands or partners limiting their social interactions with other women through a lack of trust or jealousy:

> He stops me from going around with other women in the community, always he wants me to follow his ideas or instructions on what to do.
>
> He ruined my life and I'm like a slave or prisoner.

Unlike the other forms of abuse in relationships, the mean age of women who reported social isolation in their relationships was similar to those who did not report social isolation, 27.85 compared with 27.26. t(378) = .78, p = .439. Neither school education nor post-school education was associated with social isolation. For women with education to grade 10 or above, 42.1% reported social isolation in their relationships (n = 40) compared with 36.1% of women with below grade 10 levels of education (n = 109) (χ^2 = 1.114; df = 1; p = .291); 25% of tertiary educated women reported social isolation (n = 2) compared with 27.8% of women with other post-school training (n = 5); and 38.1% of women with no post-school education (n = 143) (χ^2= 1.323; df = 2; p = .516). Women in paid employment and women not currently employed reported social isolation in their relationships at similar rates: 38.9% of employed women (n = 28) and 42.9% of self-employed women (n = 3) reported social isolation in their relationships, compared with 36.7% of women who were not currently employed (n = 117) (χ^2 = 5.224; df = 4; p = .260).

Twenty-six-and-a-half percent of women who reported social isolation (n = 26) were HIV positive compared with 19.7% of women who did not report social isolation (n = 28) (χ^2 = 1.543; df = 1; p = .214). Of women who reported social isolation, 12.2% (n = 15) tested positive; although not statistically significant, these results did approach significance (χ^2 = 10.506; df = 5; p = .056).

Summary of participants' recommendations for support services

The majority of women (ie 74.9% of the sample, n =311) had not accessed support services. Their comments showed that they had relied on family or kept to themselves. The answers participants gave to recommendations for support services fall

into seven categories: police responses, legislation and legal reform, court processes and responses, prison and rehabilitation for offenders, empowerment of women, education for men in the community, community and counselling services and HIV education, intervention and prevention.

Comments about police responses included: police should have greater awareness of violence against women in order to be more effective; police women should be available to interview victims of violence; police stations should be located closer to where people live; and police need to change their responses to protect women instead of lecturing women on 'not to provoke husbands to beating them'. Some responses from participants in the study showed a lack of knowledge about existing legislation that aims to protect women from violence within marriage and in the community: 'We should have some laws to protect us since woman are always victims of violence'. Many participants' comments are concerned with the need to strengthen the courts' responses to violence against women, including village (local) courts. They emphasised the importance of ensuring that legislation against violence against women is enforced effectively and that women's and children's rights are respected. Prison sentences are seen as an appropriate response to violence against women: 'Put offenders in jail and teach them to care for their wives, girlfriends'. Participants also called for a 'strict' response, so that men do not break the law.

The government and churches were seen by some as being responsible for educating men about relating in non-violent ways to wives and families. Women commented on the need to provide more education and information, described as 'awareness talk', about HIV/AIDS, particularly targeting men. Many women commented on the need for accessible, free crisis and care centres established within provinces and funded by the government. Women proposed that the purposes of such centres should be to respond to violence against women and to provide local support and assistance to women in need. Women also advocated for services to reach more remote areas such as settlements, villages and islands off the mainland. Women's responses showed their value for self-empowerment and self-reliance; for example, 'Learn how to look after yourself, check out people and our partners carefully'. Financial independence is seen as an important aspect of empowerment for women that will also benefit their children.

Discussion

The rates of partner abuse reported by women in this study are very high: 58% of the sample reported physical and/or emotional abuse, 47% of the sample reported financial abuse, 44% of the sample reported sexual abuse, and 38% of the sample reported social isolation. Amnesty International had estimated that relationship violence against women in PNG affects between 50% to 100% of women, depending on the geographical area; however, there is not a strong evidence-base for these estimates, or even a uniform way of collecting statistics on domestic violence in PNG (2006). This is an under-researched area with associated very limited data. The WHO's (2005b) multi-country study on domestic violence, which focused on physical and sexual violence, found rates of between 15% to 71% of women affected.

The finding in this study that women reporting all forms of partner abuse are older than those who do not report abuse suggests that women may be at greater risk of violence as their relationships continue over time. Of the five forms of intimate partner violence examined in this study, physical, emotional and sexual abuse were the strongest indicators of HIV risk. The strong link between violence against women in relationships, particularly physical, emotional and sexual abuse, and women's HIV positive status, demonstrates an urgent need to strengthen existing services in identifying, intervening in and preventing domestic violence. This is necessary both to protect women and to reduce the spread of HIV. Financial abuse and social isolation have not been

demonstrated as being linked to women's HIV status in this study, but clearly cause great distress to women and affect their wellbeing. The qualitative data gathered for this study provides an important perspective on women's experience of the violence they have experienced. While some women demonstrated an attitude of acceptance, many women described the impact on their lives as serious and undermining of their wellbeing.

The lack of contemporary research on the relationship between violence against women and HIV transmission in PNG is typical of the overall paucity of research in developing countries and the emphasis on clinical and epidemiological research in the HIV/AIDS area. The HIV/AIDS epidemic and violence against women are both critical issues that need to be addressed internationally. This study demonstrates that these two issues are closely related, and particularly so in developing countries such as PNG. All HIV/AIDS research and intervention in PNG must keep in mind the role that domestic violence plays in the transmission of HIV and should include community education strategies to reduce violence against women, and financial support for domestic violence intervention, as part of the national response.

This study has also shown that access to education and participation in the workforce are not sufficient to protect women from violence in their relationships. Other international studies on the links between violence against women and HIV transmission have found that women's lack of access to economic and social resources must be addressed to reduce women's risk of HIV (Weiss & Gupta 1998). The recommendations made by women in this study for intervening in violence against women provide some directions for such interventions, for example, increasing the financial independence of women through micro-finance programs. The vast gap in access to economic and social resources between men and women in PNG will not be closed through an individual or organisational focus alone.

Structural approaches to empower women and to examine existing gender norms in society are urgently needed. Bott et al (2005) emphasised the need for multi-sectorial responses at the individual, community, organisational and policy levels to prevent violence against women. There is a need for specific social interventions such as improving girls' access to secondary and post-school education, improving women's human rights, increasing the number of women in paid employment and in leadership positions in their communities, and increasing the status of women at legislative, social policy and service levels.

This research area is of importance to the social and economic future of PNG, as gender-based violence is an impediment to economic development, a considerable public health cost, a risk factor in HIV transmission and a concerning violation of human rights. This study has shown that there is a need for all organisations which deal with women, particularly health, antenatal, Voluntary Care and Counselling services, churches and faith based organisations to specifically address the issue of domestic violence when assessing their needs. Most women had not sought help for domestic violence from services and relied on their informal social support networks of family. The recommendations made by women for responding to their needs show the importance of training police and courts in how to respond more sensitively and effectively to women who have experienced domestic violence. This is a similar finding to the WHO (2005b) multi-country study which found that between 55% to 95% of their participants had not sought help from formal services such as health and police.

Limitations

A limitation of this research study was that some interviewers were more skilled than others at interviewing and recording the qualitative responses of participants to questions, particularly where these were difficult questions to ask. Interview schedules from Morobe were less likely to contain in-depth responses. However, in general,

the standard of the recording of qualitative data collected was excellent. It was clear in analysing the data that the majority of interviewers took the task very seriously and gathered high quality data from participants. A structured interview was chosen as the data collection method most likely to result in the gathering of uniform data with multiple interviewers. This method limited the collection of in-depth qualitative data and did not allow interviewers the flexibility of further exploring participants' stories.

The sampling method was based on interviewing women accessing antenatal and Voluntary Care and Counselling services rather than a population study. Therefore, as probability sampling was not used, the generalisability of the study's findings is limited. However, the reliability of the findings has been tested by comparing the results of this study with previous studies on violence against women. The *n* for some of the sub-groupings such as tertiary educated women was very small, and this did not allow for statistically valid comparisons to be made across sub-groups. In other words, apparent differences reported among groups in some cases could not be substantiated. It is recommended that the study be repeated with a larger sample, using population survey techniques.

HIV testing was not available in all areas of PNG in 2006 when the data collection for this study took place. Anti-retroviral treatment was also not widely available in 2006 (National Aids Council Secretariat 2008) and there was a lack of incentive for people to undergo HIV testing.

Despite these limitations, the study has revealed the importance of a gender analysis of the transmission of HIV and its relationship to violence against women within PNG. The study has given women who experience domestic violence the opportunity to tell their stories and to make recommendations themselves about the services they require.

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